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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/608,976

06/27/2003

David E. Rodrigues

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EXAMINER

VIJAYAKUMAR, KALLAMBELLA M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

09/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/608,976	Applicant(s) RODRIGUES, DAVID E.	
	Examiner KALLAMBELLA VIJAYAKUMAR	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-19 is/are pending in the application.
 4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/13/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/2007 has been entered.

Claim-1 was amended. Claim-9 cancelled. Claims 14-19 withdrawn. Claims 1-8 and 10-13 are currently being processed.

The examiner has considered the IDS filed 03/13/2007.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. Applicants argument that Creehan (US 5,445,327) does not teach the melt-blending components is noted, but fail to patentably distinguish their product by process claim over the prior art composition, and the rejection over this prior art is maintained.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-5, 7-8 and 10-13 are rejected under 35 U.S.C. 102(e/a) as being anticipated by or under 35 U.S.C. 103(a) as being unpatentable over Koevoets et al (US 6,469,093).

Koevoets et al teach the composition of a conductive PPE/PA blend about 0.4 wt% to about 3 wt% carbon fibrils (Abstract). The PPE had an intrinsic viscosity of 0.1-0.6 dl/g and further teaches mixing high viscosity and low viscosity PPE blends (CI-3, Ln 11-24); and the PA had viscosity 110-240 ml/g (CI-4, Ln 16-21). The prior art further teaches the addition of talc in the composition as a filler (CI-4, Ln 36-40); and compatibilizer such as liquid diene polymer and polyolefin wax (CI-5, Ln 30-45; 62-67); and alcohols (CI-7, Ln 7-13) <plasticizer/s> (Also, See Mitzutani et al ; US 5,504,128; CI-1, Ln 10-21). The conductive material was carbon and the like including carbon black and carbon fibrils (CI-4, Ln 44-63). Applicants define a plasticizer is a low molecular weight organic or inorganic species, which can facilitate a reduction in melt viscosity during the blending of the polymeric resin with the carbon nanotubes (Spec. Pg-12, P-0038) and several components meet this limitation. Further, the customary additives included effective amounts of plasticizers (CI-9, Ln, 25-35).

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The prior art further teaches pre-compounding carbon fibrils with/without talc in PA forming a master batch and letting down the master-batch at the down spout into an extruder containing molten PPE forming a compounded composition was formed into articles (CI-9, Ln 42 – CI-12, Ln 38). The prior art further teaches the melt viscosity of the composition to be about 150 Pa.s or less. The specific examples contained 1-1.6 wt% carbon fibrils and anticipates the CF ratio in the instant claims. The instant claims recite the limitation of $R_{\text{parallel}}/R_{\text{perpendicular}} \geq 0.15$ i.e. it needs isotropic nature of $\geq 15\%$ i.e. not a uniform isotropic distribution of fibers/properties. With regard to the resistivity ratios, the prior art composition, components processed therein and the method of making the composition including the process steps and the devices are either same or substantially same as that claimed by the instant claims, and When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). With regard to claim-13, the prior art article is either same or substantially same as that claimed by the applicants, and When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process, the claim is not patentable. See In re Marosi, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) And In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113. All the limitations of the instant claims are met.

The reference is anticipatory.

In the alternative that the disclosure by Koevoets et al be insufficient to anticipate the instant claims, the instant claimed method steps nonetheless would have been obvious to a person of ordinary skilled in the art over the disclosure because the reference teaches each of the claimed ingredients within the structure and a method of making it, and it has the same common utility as conductive plastic. The burden is upon the applicant to prove otherwise. In re Fitzgerald, 619 F.2d 67, 205 USPQ594 (CCPA 1980).

2. Claims 1-5, 7-8 and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by or under 35 U.S.C. 103(a) as being unpatentable over Nahaas et al (US 5,643,502).

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Nahaas et al teach a method of making a conductive polymer by forming a master-batch comprising low viscosity polycarbonate (plasticizer) and a pelletized product formed by melt kneading PC, polybutadiene and styrene acrylonitrile to provide 2%- CF, 69%-PC and 29%-ABS by melt extruding the composition. Applicants define a plasticizer is a low molecular weight organic or inorganic species, which can facilitate a reduction in melt viscosity during the blending of the polymeric resin with the carbon nanotubes (Spec. Pg-12, P-0038) and low viscosity PC meets this limitation. With regard to the resistivity ratios, the prior art composition, components processed therein and the method of making the composition including the process steps and the devices are either same or substantially same as that claimed by the instant claims, and When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). With regard to claim-13, the prior art article is either same or substantially same as that claimed by the applicants, and When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process, the claim is not patentable. See In re Marosi, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) And In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113. All the limitations of the instant claims are met.

The reference is anticipatory.

In the alternative that the disclosure by Nahaas et al be insufficient to anticipate the instant claims, the instant claimed method steps nonetheless would have been obvious to a person of ordinary skilled in the art over the disclosure because the reference teaches each of the claimed ingredients within the structure and a method of making it, and it has the same common utility as conductive plastic. The burden is upon the applicant to prove otherwise. In re Fitzgerald, 619 F.2d 67, 205 USPQ594 (CCPA 1980).

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Koevoets et al (US 6,469,093) or over Nahaas et al (US 5,643,502) in view of Wadadhara et al (US 6,384,128).

The disclosures on the composition and method of making the conductive polymeric composition by Koevoets as set forth in rejection-1 under 35 USC 102(e/a)/103(a) and by Nahaas as set forth in rejection-2 under 35 USC 102(b)/103(a) are herein incorporated

The prior art/s fail/s to teach a composition containing carbon black/conductive filler added to fibril-containing polymeric compositions. However, Koevoets teaches that any conductive material that does not significantly adversely effect the physical characteristics of the thermoplastic composition such as carbon or the like and their use in automotive parts (CI-4, Ln 45-48; CI-12, Ln 35-39). Nahaas teaches the application of the molded plastic for electrostatic painting, electronic and automotive applications wherein the polymers are filled with conductive fillers (CI-1, Ln 16-29; CI-8, Ln 5-34).

In the analogous art Wadadhara et al teach the thermoplastic molding compositions containing a dispersion of Carbon black and VGCF in PPE and PA (Abstract) in forming molded articles for automotive applications or housings (CI-5, Ln 32-48; CI-9, Ln 40-44; CI-23, Ln 27-37; CI-25, Ln 21-23; CI-36, Ln 25-30).

It would have been obvious to a person of ordinary skilled in the art to add additional conductive fillers in the thermoplastic molding compositions of either Koevoets et al or Nahaas et al as a choice of design of material composition for automotive parts, with predictable results and reasonable expectation of success because it was well known to add additional conductive fillers in the thermoplastic molding compositions for automotive parts at the time of the disclosure of the invention by the applicants as disclosed by Wadadhara et al.

4. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by or under 35 U.S.C. 103(a) as being unpatentable over Creehan (US 5,445,327).

Creehan teaches a composite comprising a polymer such as polyester, polyamide or polyurethane; a filler comprising carbon fibrils and carbon black; and a viscosity modifier such as a solvent (MEK, water mineral oil) or a reactive diluent (styrene, acrylates), which is made by mixing the components in a stirred ball mill with shear and impact forces and **substantially uniformly dispersing the filler throughout the matrix** material, and this will inherently meet the ratio of resistivities (Abstract,

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CI-1, Ln 36-CI-2, Ln 48; CI-3, Ln 2-59). When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process, the claim is not patentable. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) And *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113. All the limitations of the instant claims are met.

The reference is anticipatory.

In the alternative that the disclosure by Creehan et al be insufficient to arrive at the claimed article, it would have been obvious to a person of ordinary skill in the art to optimize the degree of dispersion of particles in the matrix by varying the milling time with reasonable expectation of success, because the prior art is suggestive of tailoring degree of uniformity with improved composite properties (Col 2, Ln 51-59; Col-4, Ln 12-18; Table-1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KALLAMBELLA VIJAYAKUMAR whose telephone number is (571)272-1324. The examiner can normally be reached on M-F 07-3.30.

The prior arts that are cumulative would be Shibuta (US 6,184,280), Kurasawa et al (US 6,608,133)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 5712721358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KMV/
August 26, 2008.

/Stanley Silverman/

Supervisory Patent Examiner, Art Unit 1793